What is claimed is:

1. A cooling system for cooling racks in a data center, said system comprising:

a cooling device for circulating cooling fluid in said data center, said cooling device including a fan;

a plenum having a plurality of returns and an outlet, wherein said outlet of said plenum is in fluid communication with said fan, wherein said plurality of returns are configured for removing said cooling fluid from said data center and are operable to vary a characteristic of said removal of cooling fluid through said returns.

2. The system according to claim 1, wherein said characteristic of said cooling fluid comprises at least one of volume flow rate, velocity and direction of cooling fluid removal.

3. The system according to claim 1, further comprising:

at least one return controller operable to control at least one of said returns, wherein said at least one return controller is configured to substantially independently control said returns to thereby substantially independently vary said characteristic of said cooling fluid removal.

4. The system according to claim 3, further comprising:

a plurality of sensors configured to sense an environmental condition within said data center, said environmental condition including at least one of temperature, humidity, pressure, and cooling fluid flow rate, wherein said at least one return controller is configured to substantially independently control said returns in response to said measured environmental condition.

5. The system according to claim 3, wherein said at least one return controller is operable to substantially independently control said returns on the basis of an anticipated amount of heat predicted to be generated by said racks.

6. The system according to claim 3, further comprising:

a variable capacity compressor; and

a cooling device controller operable to control the speed of said compressor and said speed of said fan to thereby vary said removal of said cooling fluid by said cooling device in response to signals received from said at least one return controller.

7. The system according to claim 3, further comprising:

a cooling device controller operable to control the intake of said cooling fluid by said cooling device; and

a pressure sensor situated within said plenum to measure the pressure of said cooling fluid located within said plenum,

wherein said cooling device controller is operable to vary the intake of said cooling fluid by said cooling device in response to the measured pressure of said cooling fluid in said plenum.

8. The system according to claim 3, further comprising:

a vent plenum having a plurality of vent outlets and a vent inlet, wherein said vent inlet of said vent plenum is in fluid communication with said fan;

a plurality of vents for supplying said cooling fluid to said racks, wherein said vents are operable to vary a characteristic of said supply of cooling fluid through each of said vents; and

at least one vent controller operable to control at least one of said vents, wherein said at least one vent controller is configured to substantially independently control said vents to thereby substantially independently vary said characteristic of said cooling fluid supplied through said vents.

9. The system according to claim 8, wherein said vent controller is operable to substantially independently control said vents in response to at least one of said returns being varied.

10. The system according to claim 3, further comprising a mobile device configured to sense at least one environmental condition within said data center and relay data associated with said at least one sensed environmental condition to said return controller.

11. The system according to claim 10, wherein said return controller is operable to substantially independently control said returns in response to said relayed data associated with said environmental conditions.

12. A method of cooling a plurality of racks in a data center, said method comprising:

activating a cooling system and opening a plurality of returns, said returns being configured to remove cooling fluid from various locations of said data center;

sensing the temperatures of said racks;

determining whether said sensed temperatures are within a predetermined temperature range; and

varying said removal of said cooling fluid from said racks in response to said sensed temperatures being outside said predetermined temperature range.

13. The method according to claim 12, further comprising:

determining whether the measured temperatures of said racks are below or equal to a predetermined minimum set point temperature;

decreasing the removal of said cooling fluid from locations around said racks having measured temperatures that fall below or equal said predetermined minimum set point temperature; and

increasing the removal of said cooling fluid from said racks having measured temperatures that exceed said predetermined minimum set point temperature.

14. The method according to claim 13, further comprising:

decreasing an intake of said cooling fluid by said cooling system in response to said decrease in cooling fluid removal from said racks exceeding said increase in cooling fluid removal from said racks.

15. The method according to claim 13, further comprising:

increasing an intake of said cooling fluid by said cooling system in response to said decrease in cooling fluid removal from said racks falling below said increase in cooling fluid removal from said racks.

16. The method according to claim 12, further comprising:

sensing a pressure of an intake of said cooling fluid;

determining whether said sensed pressure is within a predetermined pressure range; and

varying an intake of said cooling system in response to said sensed pressure falling outside of said predetermined pressure range.

17. The method according to claim 16, wherein said step of varying said cooling system intake includes determining whether said measured pressure falls below or equals a predetermined minimum set point pressure.

18. The method according to claim 17, further comprising:

decreasing the intake of said cooling system in response to said measured pressure falling below or equaling said predetermined minimum set point pressure.

19. The method according to claim 17, further comprising:

increasing the intake of said cooling system in response to said measured pressure exceeding said predetermined minimum set point pressure.

20. The method according to claim 13, further comprising:

performing a numerical modeling of a temperature distribution and flow characteristics of the data center; and

manipulating said cooling system in response to said numerical modeling.

21. The method according to claim 20, further comprising:

implementing said numerical modeling to correlate at least two of temperature, velocity and pressure of said cooling fluid and power draw of said racks within said data center to thereby infer a thermal condition throughout said data center, wherein said manipulating step further comprises manipulating said cooling system in response to said inferred thermal condition.

22. The method according to claim 12, further comprising:

decreasing the supply of said cooling fluid to said racks in response to decreasing the removal of said cooling fluid; and

increasing the supply of said cooling fluid to said racks in response to increasing the removal of said cooling fluid.

23. The method according to claim 22, wherein at least one of said supply of cooling fluid and said return of cooling fluid is modified in response to one or more of cooling fluid flow, temperature, and pressure being outside a predetermined range.

24. The method according to claim 12, further comprising:

receiving temperatures from a movable device configured to detect at least one environmental condition at various locations of said data center;

determining whether at least one of said sensed temperatures and said received temperatures are within a predetermined temperature range; and

varying at least one of said returns in response to at least one of said sensed and received temperatures being outside of said predetermined temperature range.

25. An apparatus for cooling a plurality of racks in a data center, said apparatus comprising:

means for activating a cooling system and opening a plurality of returns, each of said returns being configured to remove cooling fluid from various locations of said data center;

means for sensing the temperatures of said racks;

means for determining whether said sensed temperatures are within a predetermined temperature range; and

means for varying said removal of said cooling fluid from said racks in response to said sensed temperatures being outside said predetermined temperature range.

26. The apparatus according to claim 25, further comprising:

means for determining whether the measured temperatures of said racks are each below or equal to a predetermined minimum set point temperature;

means for decreasing the removal of said cooling fluid from locations around said racks having measured temperatures that fall below or equal said predetermined minimum set point temperature; and

means for increasing the removal of said cooling fluid from said racks having measured temperatures that exceed said predetermined minimum set point temperature.

27. The apparatus according to claim 26, further comprising:

means for decreasing an intake of said cooling fluid by said cooling system in response to said decrease in cooling fluid removal from said racks exceeding said increase in cooling fluid removal from said racks.

28. The apparatus according to claim 26, further comprising:

means for increasing an intake of said cooling fluid by said cooling system in response to said decrease in cooling fluid removal from said racks falling below said increase in cooling fluid removal from said racks.

29. The apparatus according to claim 25, further comprising:

means for sensing a pressure of an intake of said cooling fluid;

means for determining whether said sensed pressure is within a predetermined pressure range; and

means for varying an intake of said cooling system in response to said sensed pressure falling outside of said predetermined pressure range.

30. The apparatus according to claim 29, wherein said means for varying said cooling system intake includes means for determining whether said measured pressure falls below or equals a predetermined minimum set point pressure.

31. The apparatus according to claim 30, further comprising:

means for decreasing the intake of said cooling system in response to said measured pressure falling below or equaling said predetermined minimum set point pressure.

32. The apparatus according to claim 30, further comprising:

means for increasing the intake of said cooling system in response to said measured pressure exceeding said predetermined minimum set point pressure.

33. The apparatus according to claim 26, further comprising:

means for performing a numerical modeling of a temperature distribution and flow characteristics of the data center; and

means for manipulating said cooling system in response to said numerical modeling.

34. The apparatus according to claim 33, further comprising:

means for implementing said numerical modeling to correlate at least two of temperature, velocity and pressure of said cooling fluid and power draw of said racks within said data center to thereby infer a thermal condition throughout said data center, wherein said manipulating step further comprises manipulating said cooling system in response to said inferred thermal condition.

35. The apparatus according to claim 25, further comprising:

means for decreasing the supply of said cooling fluid to said racks in response to decreasing the removal of said cooling fluid; and

means for increasing the supply of said cooling fluid to said racks in response to increasing the removal of said cooling fluid.

36. The apparatus according to claim 35, wherein at least one of said supply of cooling fluid and said return of cooling fluid is determined by one or more of a flow sensor, temperature sensor, and pressure sensor.

37. The apparatus according to claim 25, further comprising:

means for receiving temperatures from a movable device configured to detect at least one environmental condition at various locations of said data center;

means for determining whether at least one of said sensed temperatures and said received temperatures are within a predetermined temperature range; and

means for varying at least one of said returns in response to at least one of said sensed and received temperatures being outside of said predetermined temperature range.

38. A computer readable medium on which is embedded computer software, said software comprising executable code for performing a method of cooling a plurality of racks in a data center, said method comprising:

activating a cooling system and opening a plurality of returns, each of said returns being configured to remove cooling fluid from various locations of said data center;

sensing the temperatures of said racks;

determining whether said sensed temperatures are within a predetermined temperature range; and

varying said removal of said cooling fluid from said racks in response to said sensed temperatures being outside said predetermined temperature range.

39. The computer readable medium according to claim 38, further comprising:

determining whether the measured temperatures of said racks are below or equal to a predetermined minimum set point temperature;

decreasing the removal of said cooling fluid from locations around said racks having measured temperatures that fall below or equal said predetermined minimum set point temperature; and

increasing the removal of said cooling fluid from said racks having measured temperatures that exceed said predetermined minimum set point temperature.

40. The computer readable medium according to claim 39, further comprising:

decreasing an intake of said cooling fluid by said cooling system in response to said decrease in cooling fluid removal from said racks exceeding said increase in cooling fluid removal from said racks.

41. The computer readable medium according to claim 39, further comprising:

increasing an intake of said cooling fluid by said cooling system in response to said decrease in cooling fluid removal from said racks falling below said increase in cooling fluid removal from said racks.

42. The computer readable medium according to claim 38, further comprising:

sensing a pressure of an intake of said cooling fluid;

determining whether said sensed pressure is within a predetermined pressure range; and

varying an intake of said cooling system in response to said sensed pressure falling outside of said predetermined pressure range.

43. The computer readable medium according to claim 42, wherein said step of varying said cooling system intake includes determining whether said measured pressure falls below or equals a predetermined minimum set point pressure.

44. The computer readable medium according to claim 43, further comprising:

decreasing the intake of said cooling system in response to said measured pressure falling below or equaling said predetermined minimum set point pressure.

45. The computer readable medium according to claim 43, further comprising:

increasing the intake of said cooling system in response to said measured pressure exceeding said predetermined minimum set point pressure.

46. The computer readable medium according to claim 39, further comprising:

performing a numerical modeling of a temperature distribution and flow characteristics of the data center; and

manipulating said cooling system in response to said numerical modeling.

47. The computer readable medium according to claim 46, further comprising:

implementing said numerical modeling to correlate at least two of temperature, velocity and pressure of said cooling fluid and power draw of said racks within said data center to thereby infer a thermal condition throughout said data center, wherein said manipulating step further comprises manipulating said cooling system in response to said inferred thermal condition.

48. The computer readable medium according to claim 38, further comprising:

decreasing the supply of said cooling fluid to said racks in response to decreasing the removal of said cooling fluid; and

increasing the supply of said cooling fluid to said racks in response to increasing the removal of said cooling fluid.

49. The computer readable medium according to claim 48, wherein at least one of said supply of cooling fluid and said return of cooling fluid is modified in response to one or more of cooling fluid flow, temperature, and pressure being outside a predetermined range.

50. The computer readable medium according to claim 38, further comprising:

receiving temperatures from a movable device configured to detect at least one environmental condition at various locations of said data center;

determining whether at least one of said sensed temperatures and said received temperatures are within a predetermined temperature range; and

varying at least one of said returns in response to at least one of said sensed and received temperatures being outside of said predetermined temperature range.